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December 20, 1976

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C/MS Action (evaluation)

MEMORANDUM FOR FIPS Points of Contact

From: Harry S. White, Jr. *Harry S. White Jr.*  
The Associate Director for ADP Standards

Subject: Proposed Federal Standard for Input/Output (I/O) Channel Interface

Enclosed for your consideration is a proposed Federal Information Processing Standard (FIPS) for I/O Channel Interface. This channel to controller interface is one of a family of interface standards for attaching peripheral devices to a computer system. This standard provides specifications for the functional, electrical and mechanical parameters for attaching peripheral controllers to the I/O Channel of a computer.

When fully implemented in Federal installations, this proposed standard is expected to ensure the economic acquisition and effective utilization of Federal systems by enabling these to be configured with components acquired from either multiple commercial sources or from the Federal inventory.

The technical specifications of this proposed FIPS were developed by the American National Standards Institute Technical Subcommittee X3T9 which is composed of participants from both industry and user organizations.

In order to ensure that all agencies have an opportunity to present their views, NBS is soliciting your comments on this proposed standard. If you find that your agency cannot concur with this proposed standard, please indicate specific changes that you feel are needed.

Also, please indicate to what extent this proposed standard is applicable to your department or agency and the expected impact it will have on your ADP systems.

Please submit your comments within ninety days of the date of this memorandum to:

Associate Director for ADP Standards  
Institute for Computer Sciences and Technology  
National Bureau of Standards  
Washington, D.C. 20234

Concurrences will be assumed if a response is not received by this date.

Enclosures

cc: State Information Systems Coordinators



Federal Information  
Processing Standards Publication

\_\_\_\_\_  
(Date)

Announcing the Standard for  
I/O CHANNEL INTERFACE

Federal Information Processing Standards Publications are issued by the National Bureau of Standards pursuant to the Federal Property and Administrative Services Act of 1949, as amended, Public Law 89-306 (79 Stat. 1127), Executive Order 11717 (38 FR 12315, dated May 11, 1973) and Part 6 of Title 15 Code of Federal Regulations (CFR).

Name of Standard. I/O Channel Interface (FIPS PUB \_\_\_\_).

Category of Standard. Hardware Standard, Interface.

Explanation. This standard is one of a family that defines the functional, electrical, and mechanical interface specifications for attaching computer peripheral devices through their control units to the input/output channel of an ADP system. This standard does not include definitions of other interface parameters (such as the power control and operation specifications) that may be needed to achieve full plug-to-plug interchangeability at the I/O channel interface level; these other specifications as well as standards for other interfaces are presently being developed and will be considered for future adoption as Federal Information Processing Standards.

This series of standards is intended to ensure the economic procurement and effective utilization of Federal ADP systems by enabling these systems to be configured with components:

- (1) Procured from independent competitive sources.
- (2) Drawn from the Federal inventory.

In the acquisition of ADP systems and components, Federal agencies shall reference this standard for specifying the I/O channel-to-peripheral controller interface.

Approving Authority. Secretary of Commerce.

Maintenance Agency. Department of Commerce, National Bureau of Standards (Institute for Computer Sciences and Technology).

Cross Index. American National Standards Institute document X3T9/600, Rev. 2, Draft Proposed American National Standard for I/O Channel Interface.

Applicability. This Federal Information Processing Standard I/O Channel Interface is applicable in the acquisition of all Automatic Data Processing Systems by the Federal Government except those systems that are commonly referred to as minicomputer and microcomputer systems.

Specifically, this standard is applicable to:

. New Systems. Whenever a new ADP system is being configured for acquisition by the Federal Government.

. Replacement of Existing Systems. Whenever computer systems (CPU's and related peripheral components) are being replaced in an existing installation.

. Augmentation of Existing Systems. Whenever an existing installation is being augmented either through add-on equipment or replacement of components for technological advantages, and the equipment originally installed meets the provisions of this standard.

Specifications. This standard incorporates by reference the technical specifications of ANSI document X3T9/600, Rev. 2, affixed.

Implementation. The provisions of this standard are effective January 1, 1978. All applicable equipment ordered on or after this date must conform to the provisions of this standard unless a waiver has been granted in accordance with the procedure described elsewhere in this publication.

Exceptions. Exceptions to the provisions of this FIPS PUB are made in the following cases:

a. For equipment installed or on order prior to the effective date of this standard.

b. Where procurement actions are in solicitations phase (i.e., Request for Proposals or Invitation for Bids have been issued) and the alteration of the procurement would be detrimental to the acquisition process.

Waivers. Heads of agencies are permitted to waive the requirements stated in this publication provided a comparative analysis shows that the advantages inherent in the use of Federal I/O Channel Interface standard are clearly offset by an even greater advantage obtainable through the use of an alternative standard or equipment specification. Consideration of any alternative should be made consistent with the Government's overall objectives for the economic acquisition and efficient utilization of ADP systems employed by the Federal Government.

Proposed waivers to the Federal Standard I/O Channel Interface shall be coordinated in advance with the National Bureau of Standards. Letters should be addressed to the Associate Director for ADP Standards, Institute for Computer Sciences and Technology, National Bureau of Standards, Washington, D.C. 20234. They should describe the nature of the waiver and set forth the reasons therefor. The supporting documentation should include:

a. Relevant documentation considered by the head of the agency in authorizing the waiver.

b. Detailed technical specifications of the components for which the deviation is sought.

c. Possible recommendations for action by NBS concerning the improvement or future development of Computer Peripheral Interface standards, relative to the waiver, should be included.

Sixty days should be allowed for review and response by the National Bureau of Standards. However, the final decision for granting the waiver is the responsibility of the agency head.

Where to Obtain Copies. Copies of this publication are for sale by the National Technical Information Service, U.S. Department of Commerce, Springfield, Virginia 22161. When ordering, refer to Federal Information Processing Standards Publication (NBS-FIPS-PUB- ), title, and Accession Number. When microfiche is desired, this should be specified. Payment may be made by check, money order, or deposit account.

Memo For Fred Ingham

Subject: Proposed Federal Standard for Input/Output(I/O)

Channel Interface

From: C/ED  
1 *Ref*,  
1. Engineering division has no reason to take exception to  
the proposed standard. which is a restatement of the current  
IBM channel interface standard.

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xuhmamxm

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